



500 Cummings Center  
Beverly, MA 01915  
1.978.619.1300  
www.atni.com

November 9, 2016

**Via ECFS**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: Written ex parte presentation  
Mobility Fund Phase II – WC Docket Nos. 10-208, 10-90

Dear Ms. Dortch:

This letter is to provide further information to the Commission regarding the structure of a challenge process to be used to perfect Form 477 data on wireless coverage in order to determine eligible areas for Mobility Fund Phase II, and to recommend a timeline for the auction. As discussed in more detail below, Atlantic Tele-Network, Inc., on behalf of itself and its subsidiaries, including, Choice Communications, LLC, NTUA Wireless, LLC, and Commnet Wireless, LLC (collectively "ATN"), believes that challenges to the Form 477 data should be supported by drive test results based on a standardized drive-test approach. Drive tests are not overly burdensome for challengers to conduct, and there are no apparent viable alternative approaches for conducting the challenge process. Given the time that would be needed for drive tests, there is no reason that the challenge process cannot be completed in the first half of 2017. With the challenge process completed, the Commission can conduct the auction in late 2017 or, at the latest, in early 2018. This will allow the benefits of Mobility Fund Phase II funding – including greater E-911 connectivity in rural areas and more opportunities to access mobile broadband, including to close the homework gap – to begin potentially a full year sooner.

**I. THE COMMISSION SHOULD ADOPT A DRIVE TEST STANDARD FOR THE MOBILITY FUND PHASE II CHALLENGE PROCESS**

**A. Drive Tests Are Not Burdensome for Challengers to Conduct**

*Drive tests are a normal part of doing business for facilities-based wireless carriers. ATN is a small- to mid-sized wireless carrier operating facilities in many rural areas. Many of ATN's employees have worked formerly for other wireless carriers, including large national carriers as well as other small and regional carriers. Based on our own experience within ATN as well as our employees' experience in the industry more generally, we can state with confidence that conducting drive tests is a normal and routine part of operating commercial mobile wireless networks. Propagation models can be valuable for planning purposes, but the only way truly to understand the extent of your own or a competitor's coverage is to conduct drive tests. As a result, wireless carriers conduct drive tests routinely. Facilities-based wireless carriers typically own drive-test equipment. There also are commercial drive-testing services with which carriers can contract to expand their own drive-testing capabilities.*

*Drive-testing is not expensive to conduct.* In ATN's experience, the cost of detailed drive testing, of the type discussed in this letter, is about \$750 per day per test car, with the capability to test 50-75 road miles per car per day (depending on terrain). For a carrier operating a facilities-based commercial mobile network – particularly a carrier considering expanding its network deeper into rural and unserved areas – this cost will not be significant for the number of road miles that are likely to be at issue in the challenge process.

*It is not necessary to conduct a full drive test in order to determine whether a challenge may be warranted.* Even if drive tests were burdensome or expensive (which they are not), it is important to bear in mind that prospective challengers do not have to conduct a full-blown drive test in order to determine whether a challenge may be warranted in a given area. Wireless carriers routinely spot-check coverage in areas by making test calls and data downloads using phones on their own and their competitors' networks to get a sense of coverage in those areas. These spot-checks cost almost nothing to perform, and thus can be a cost-effective way to determine whether the coverage in a given area may be uncertain. Prospective challengers can thus limit their actual drive testing efforts to areas where spot-checking reveals service levels may bear further investigation.

*The number of road miles subject to challenge is relatively limited.* In considering the burden of drive testing, it is important to remember that the number of road miles subject to challenge will be relatively limited. For the most part, challenges will be focused on the "borders" of carriers' existing coverage areas, where disputes arise as to the precise parameters of where coverage is insufficient. This places a significant limit on the number of miles that any prospective bidder might have to drive test during the challenge process.

In sum, drive tests are a standard part of doing business for facilities-based wireless carriers, especially those in rural areas. Any carrier with a bona fide interest in deploying 4G LTE service in unserved areas should be willing and able to undertake the time and investment to conduct drive tests in the limited areas where it believes the Form 477 data are inaccurate.

## **B. There Are No Viable Alternatives for Conducting the Challenge Process**

If the Commission does not require challengers to present drive test results, the only apparent alternative will be some form of propagation analysis. In order to conduct a challenge based on propagation analysis, the challenger will need important information regarding the Form 477 filer's network, including the locations of all cell sites serving the challenge area, the height of the antennas on the towers, and the power at which they are operating. Challengers will need these pieces of information, at minimum, in order to formulate a propagation analysis challenge regarding the Form 477 filer's coverage.

As a result, a challenge based on propagation analysis will shift significant burdens of the challenge process from the challenger onto the Form 477 filer (who presumably prepared and filed its Form 477 shapefiles in good faith). This approach may therefore engender resistance to the Mobility Fund Phase II rules from entities that may not even be participating in the competitive bidding process themselves at all. This could create unnecessary administrative burdens for the Commission (as well as burdens for Form 477 filers) and needlessly delay the auction.

Moreover, a challenge process consisting of “dueling propagation analyses” is unlikely to be productive. Carriers typically created their Form 477 shapefiles using propagation analysis, combined with some drive test data. As a result, a challenge based on propagation analysis would, in many instances, represent one propagation analysis challenging another propagation analysis. The Commission would have to develop rules specifying what kind of propagation analysis conclusions would be accepted over others. There currently is no record on which to base such rules, and it is unclear whether such a process ever could be fruitful. Moreover, efforts to develop such complicated rules would unnecessarily delay the auction.

Drive test information is superior to propagation analysis results because it represents actual data about the state of coverage in the challenge area. Any propagation analysis, no matter how careful, is at best a prediction of what coverage ought to be based on a series of assumptions. As a result, it would be superior to conduct the challenge process based on drive test data.

### **C. The Commission Should Adopt Drive Test Standards Based on Typical Industry Practices**

One important lesson that was learned in the Mobility Fund Phase I funding disbursement process was that it is crucial to set clear standards for drive tests at the outset. In Phase I, the Commission specified that recipients’ build-out was to be verified with drive-test data, but did not specify up front exactly what type of drive tests were to be conducted. Phase I recipients, including ATN, worked with USAC through an iterative process that ultimately resulted in a set of clear standards for the drive tests. This post-hoc approach created unnecessary burdens and frustration for USAC and recipients, but offers important lessons for Phase II. ATN believes that all stakeholders would agree that it is imperative for the Commission to set clear standards for drive tests at the outset for Phase II.<sup>1</sup>

The important standards that must be set in order to conduct a drive test are the following:

- Coverage standard to be tested: The Commission must specify what degree of coverage is being sampled in the drive test. Given that the Commission is establishing Mobility Fund Phase II performance criteria based on other metrics, such as data speeds, the Commission could specify that drive tests sample for the availability of a specified data speed. The Commission could require challengers to test for the Mobility Fund Phase II target speed of 10 Mbps download and 1 Mbps upload (“10/1”), or could specify some lesser standard, such as 4/1.<sup>2</sup> Alternatively, the Commission could provide for a “scanner test” approach, which is also common in the industry. Under this approach, the test would look for the existence of an adequate 4G LTE signal. Per 3GPP standards, a signal strength of -102.3 dB RSRP for a 5 MHz carrier is assumed to meet 10 Mbps download speed requirements; thus, this signal strength could be used as

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<sup>1</sup> It may be reasonable for the Commission to set different standards for drive tests in the challenge process than for drive tests in the post-construction verification process. The crucial point is that the standards for all drive tests in the program must be established and understood by all parties at the outset.

<sup>2</sup> The Commission might assume, for example, that an area where 4/1 service already is available is likely, through the operation of normal market forces, to achieve the 10/1 threshold during the five-year term of Phase II support.

the test standard. The important thing is that the Commission establish a clear and objective standard for what is being sampled in the drive test.

- Frequency of sampling: The industry standard for sampling in drive tests is between one and four samples per mile. A rigorous standard would be to require sampling every quarter mile.

These standards differ in minor respects from the drive standards that USAC adopted for verification purposes in Phase I, but ATN believes that the standards proposed herein correspond more closely to industry standard drive tests.<sup>3</sup> These proposed standards also more appropriately balance the need for accurate drive tests with the burden on carriers required to conduct drive tests in the challenge process.

## **II. THE CHALLENGE PROCESS CAN BE COMPLETED IN THE FIRST HALF OF 2017**

The Commission should adopt clear standards for drive tests in the challenge process, either in the order slated for consideration on November 17, 2016 or in a follow-on item soon thereafter. The Commission already has released relatively recent Form 477 shapefile data; if it wishes to release more recent shapefile information, it should do so soon. There is no apparent reason to delay either of these items, and the goals of the Mobility Fund, including improved access to E-911 and mobile broadband services in rural America, will be advanced by a more expeditious process.

With the availability of recent shapefile data and clear standards for a drive test-based challenge process, the Commission could begin the challenge process in early 2017. ATN recognizes that drive tests may take some time to conduct. ATN therefore proposes that the Commission allow a period of up to 90 days for carriers to prepare and submit drive test challenges. Even assuming conservatively a single drive-test car testing only 50 miles per day, a potential challenger could drive-test, in less than 90 days, the entire route from Boston, Massachusetts, to San Diego, California, and on up to Seattle, Washington. As noted above, the number of road miles that will be subject to challenge – particularly by any one carrier – is likely to be considerably less than this. Thus, even if the Commission permitted a 90-day period for drive tests, the challenge process could be completed by April 2017.

## **III. WITH THE CHALLENGE PROCESS COMPLETED IN EARLY 2017, THE AUCTION SHOULD PROCEED IN LATE 2017 OR, AT THE LATEST, IN EARLY 2018**

With the challenge process completed by April 2017, there is no reason that the Commission could not proceed to conduct the Phase II auction in the second half of 2017. This would advance the goals of Mobility Fund Phase II by [soon] expanding mobile broadband coverage to more rural consumers who currently lack it. This will allow more Americans living, working, and traveling in rural areas to contact 911 in emergency situations, and help close the “Homework Gap” for rural students living in areas that lack access to fixed broadband. At the latest, the Phase II auction should proceed in early 2018.

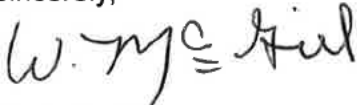
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<sup>3</sup> In the Mobility Fund Phase I verification process, USAC required sampling every 100 yards, and rejected any mile of road test in which any 100 yard measurement was missing. This is an unnecessarily rigorous standard for a challenge process drive test.

\* \* \*

ATN looks forward to continuing to work with the Commission on the implementation of Mobility Fund Phase II.

Sincerely,

A handwritten signature in black ink, appearing to read "W. McGill".

Wade McGill  
Vice President, U.S. Wireless Operations

cc: Edward Smith  
Claude Aiken  
Travis Litman  
Nicholas Degani  
Amy Bender  
Jon Wilkins  
Jim Schlichting  
Chris Helzer  
Charles Eberle  
Audra Hale-Maddox  
Margaret Wiener  
Mark Montañó  
Rita Cookmeyer  
Kelly Quinn